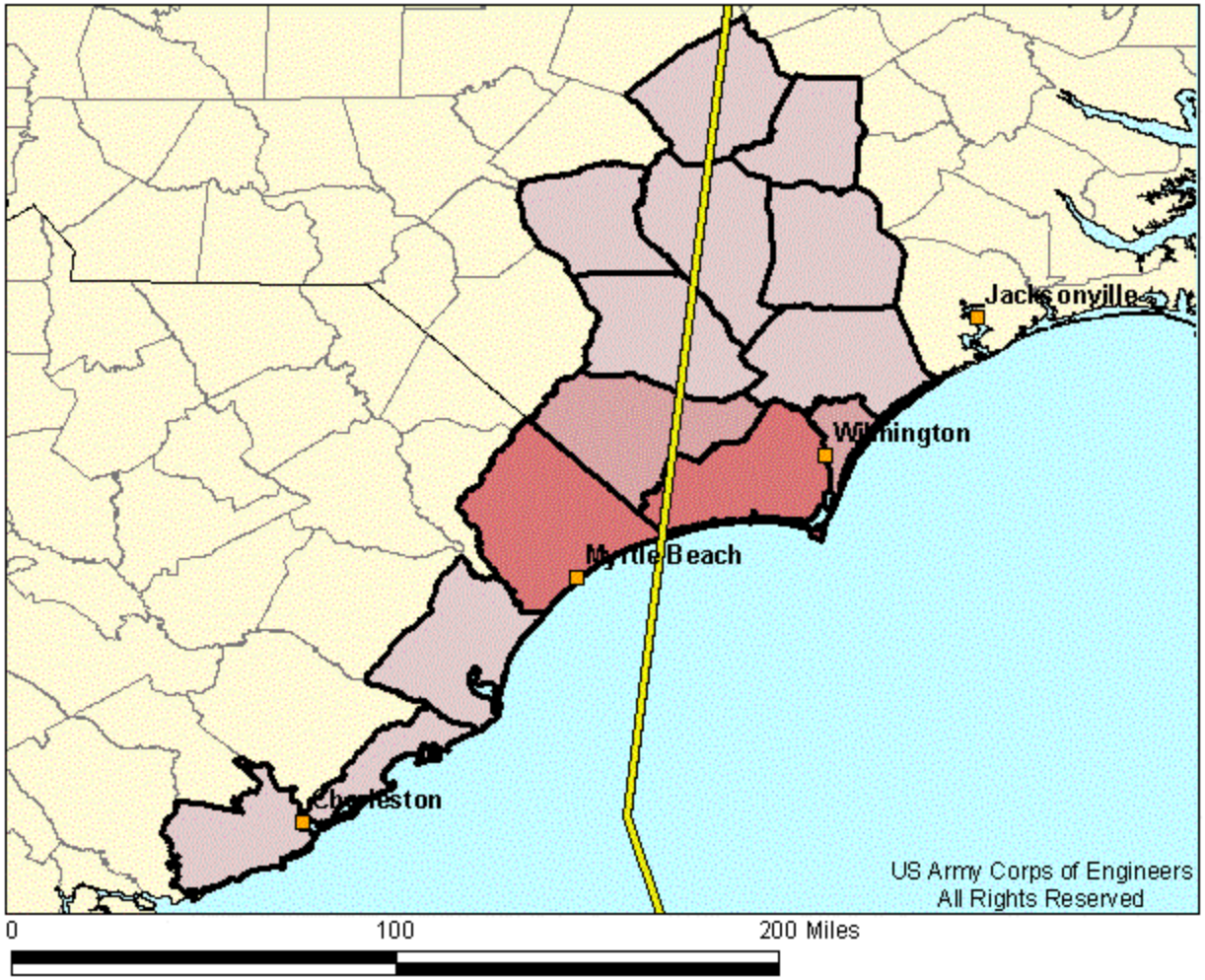
US Army Corps of Engineers

Hurricane Hazel 1954 Debris Model

Landfall Plus About 12 Hours

For Planning Purposes Only!



Post Landfall Debris Model Results

North Carolina - 681,000 Yards
South Carolina - 439,000 Yards

Model results per County on following page

This model is based on a Category 1 storm making landfall near Wilmington, NC.

Historic Track

Debris

- < 100,000 cubic yards
- 100,000 - 249,999 cubic yards
- 250,000 - 499,999 cubic yards
- 500,000 - 999,999 cubic yards
- >1,000,000 cubic yards

Information provided on this page displays a Category 1 storm making landfall near Wilmington, NC. These projections are based on information from the NHC (0930 EDT 05/15/2008) forecast. The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds, but does not include volume that may be covered by private insurance. Debris volume may include storm surge generated debris.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Hazel 1954 Debris Model

Generated By:
Siemsen, LRL 1000 EDT 05/15/2008

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Hazel 1954 Debris Model

Landfall Plus About 12 Hours

For Planning Purposes Only!

State	Yards per State	County	Yards per County
North Carolina		Bladen	58,000
		Brunswick	291,000
		Columbus	107,000
		Cumberland	3,000
		Duplin	2,000
		Johnston	5,000
		New Hanover	124,000
		Pender	19,000
		Sampson	72,000
		Wayne	< 1,000
North Carolina	681,000		
South Carolina		Charleston	< 1,000
		Georgetown	28,000
		Horry	411,000
South Carolina	439,000		

The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds, but does not include volume that may be covered by private insurance. Debris volume may include storm surge generated debris.

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Hurricane Hazel 1954 Debris Model

Generated By:
Siemsen, LRL 1000 EDT 05/15/2008

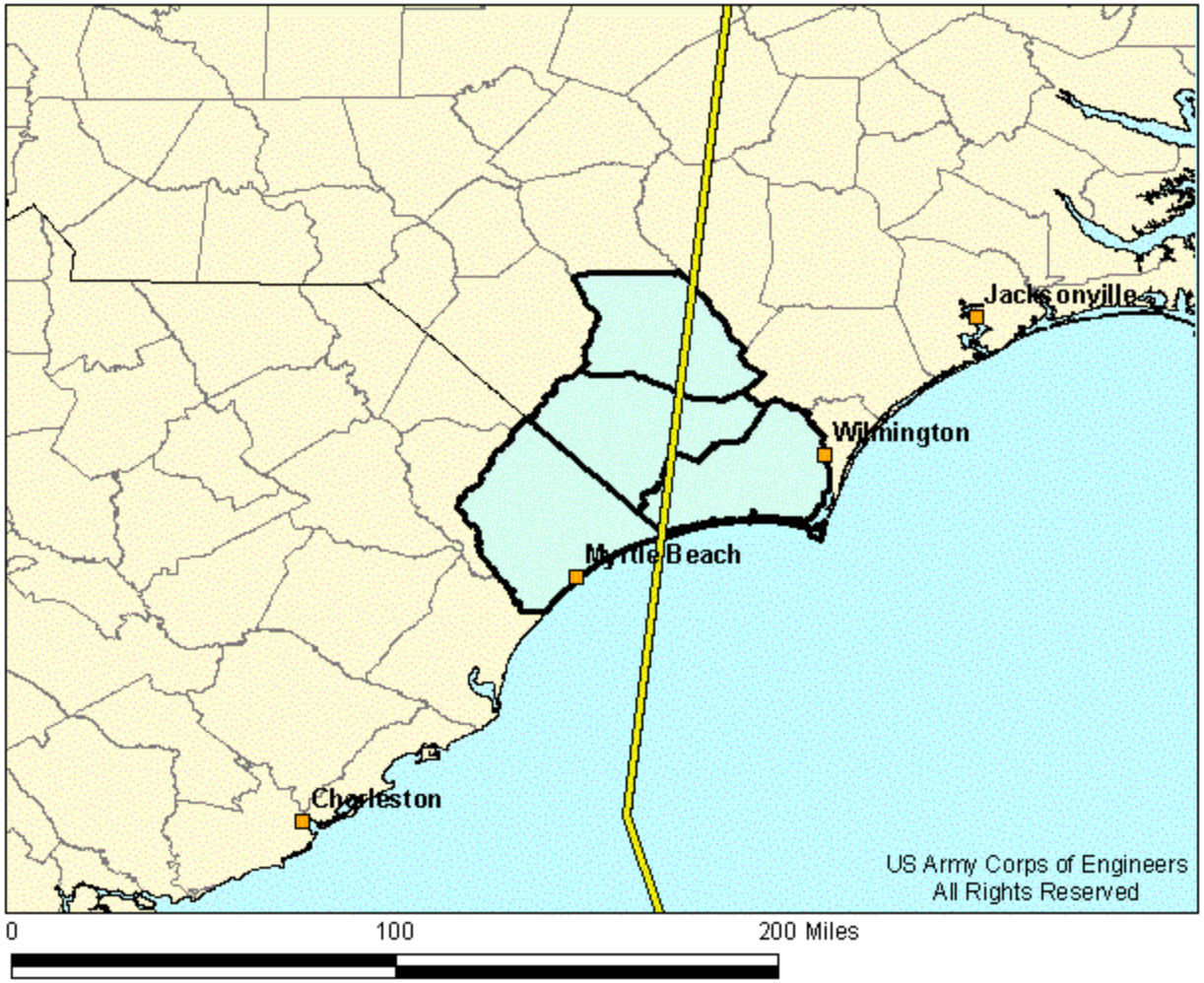
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Hazel 1954 Commodities Model

Landfall Plus About 12 Hours

For Planning Purposes Only!



Post Landfall Water Model Results

Day One / Day Two / Day Three
NC – 2/3/6 Truckloads
SC – 1/2/3 Truckloads

Model results per County on following page

This model is based on a Category 1 storm making landfall near Wilmington, NC.

Historic Track

Commodities

- < 5 Trucks Each
- 5 - 10 Trucks Each
- 11 - 20 Trucks Each
- 21 - 40 Trucks Each
- > 40 Trucks Each

Information provided on this page displays a Category 1 storm making landfall near Wilmington, NC. These projections are based on information from the NHC ***(0930 EDT 05/15/2008)*** forecast. The amount of commodities forecasted is based on Mission Guide Book requirements and SME input. The graphic represents single day needs with full distribution system in place and operating.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Hazel 1954 Commodities Model	
Generated By: Siemsen, LRL 1000 EDT 05/15/2008	
Sources: HURREVAC LRL-DEBRIS	Page 3 of 12

US Army Corps of Engineers

Hurricane Hazel 1954 Commodities Model

Landfall Plus About 12 Hours

For Planning Purposes Only!

State	Truckloads per State	County	Truckloads per County
North Carolina		Bladen	1
		Brunswick	4
		Columbus	1
North Carolina	6		
South Carolina		Horry	3
South Carolina	3		

The amount of commodities forecasted is based on Mission Guide Book requirements and SME input and the above table indicates suggested needs based on phased deployment of a commodities distribution system.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

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Hurricane Hazel 1954 Commodities Model

Generated By:
Siemsen, LRL 1000 EDT 05/15/2008

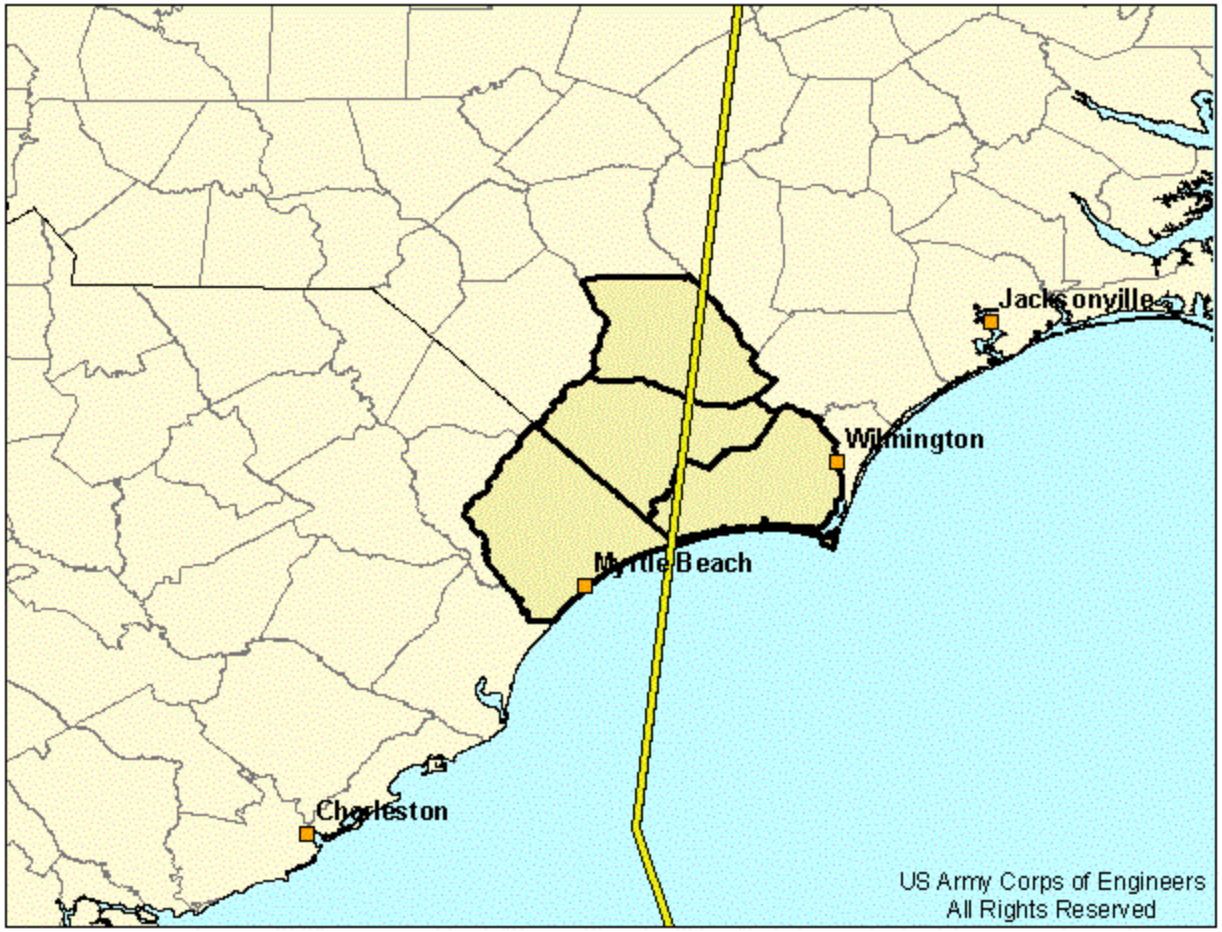
Sources:
HURREVAC
LRL-DEBRIS

Hurricane Hazel 1954 Temporary Roofing Model

US Army Corps of Engineers

Landfall Plus About 12 Hours

For Planning Purposes Only!



0 100 200 Miles

Post Landfall Temporary Roofing Model Results

North Carolina - 1,000
South Carolina - 500

Model results per County on following page

This model is based on a Category 1 storm making landfall near Wilmington, NC.

Historic Track

Temporary Roofing

- < 2,000 units
- 2,000 - 3,999 units
- 4,000 - 5,999 units
- 6,000 - 9,999 units
- > 10,000 units

Information provided on this page displays a Category 1 storm making landfall near Wilmington, NC. These projections are based on information from the NHC (0930 EDT 05/15/2008) forecast. Temporary roofing is based on 3% in CAT 1.

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Hurricane Hazel 1954 Roofing Model	
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Sources: HURREVAC LRL-DEBRIS	Page 5 of 12

US Army Corps of Engineers

Hurricane Hazel 1954 Temporary Roofing Model

Landfall Plus About 12 Hours

For Planning Purposes Only!

State	House Units per State	County	House Units per County
North Carolina		Bladen	< 100
		Brunswick	800
		Columbus	200
North Carolina	1,000		
South Carolina		Horry	500
South Carolina	500		

Temporary roofing is based on 3% in CAT 1.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

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Hurricane Hazel 1954 Roofing Model

Generated By:
Siemsen, LRL 1000 EDT 05/15/2008

Sources:
HURREVAC
LRL-DEBRIS

Hurricane Hazel 1954 Temporary Housing Model

US Army Corps of Engineers

Landfall Plus About 12 Hours

For Planning Purposes Only!

0 100 200 Miles

Post Landfall Temporary Housing Model Results

Model results per County on following page

This model is based on a Category 1 storm making landfall near Wilmington, NC.

Historic Track

Temporary Housing

- < 2,000 units
- 2,000 - 3,999 units
- 4,000 - 5,999 units
- 6,000 - 9,999 units
- > 10,000 units

Information provided on this page displays a Category 1 storm making landfall near Wilmington, NC. These projections are based on information from the NHC (0930 EDT 05/15/2008) forecast. Temporary housing is based on nothing.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Hazel 1954 Housing Model	
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Sources: HURREVAC LRL-DEBRIS	Page 7 of 12

US Army Corps of Engineers

Hurricane Hazel 1954 Temporary Housing Model

For Planning Purposes Only!

Landfall Plus About 12 Hours

State	House Units per State	County	House Units per County
		No Temporary Housing need expected	

Temporary housing is based on nothing.

Details about this model may be obtained at http://www.englink.usace.army.mil
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Source: US Army Corps of Engineers, All Rights Reserved

Hurricane Hazel 1954 Housing Model

Generated By:
Siemsen, LRL 1000 EDT 05/15/2008

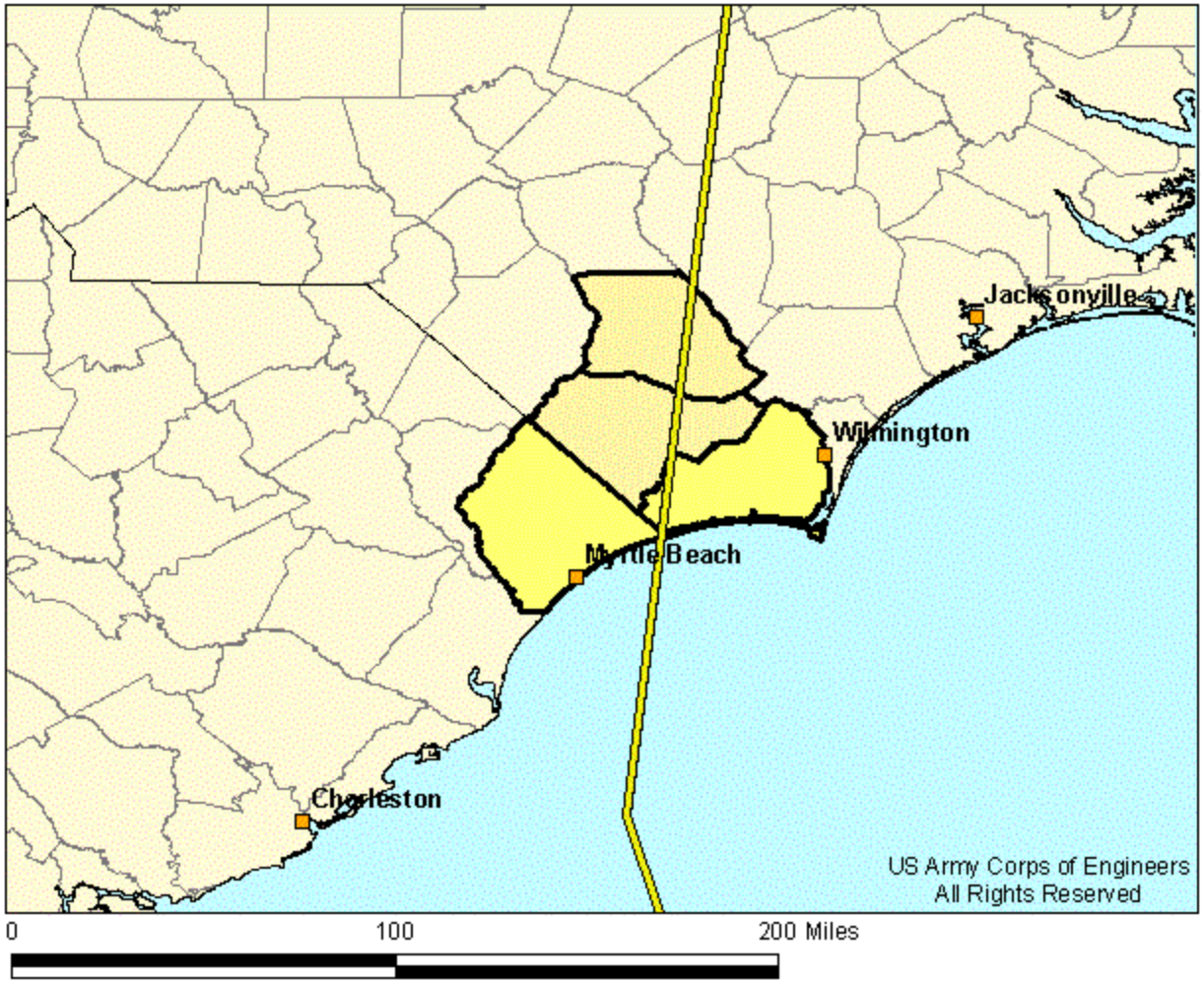
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Hazel 1954 Population Model

Landfall Plus About 12 Hours

For Planning Purposes Only!



Post Landfall Population Model Results

North Carolina - 77,000
South Carolina - 36,000

Model results per County on following page

This model is based on a Category 1 storm making landfall near Wilmington, NC.

Historic Track

Population

- < 25,000 persons
- 25,000 - 99,999 persons
- 100,000 - 174,999 persons
- 175,000 - 249,999 persons
- > 250,000 persons

Information provided on this page displays a Category 1 storm making landfall near Wilmington, NC. These projections are based on information from the NHC (0930 EDT 05/15/2008) forecast. The numbers of persons included in this model output are those that would be included within estimated hurricane force winds (Census 2000 values adjusted to July 2006 values).

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Hazel 1954 Population Model	
Generated By: Siemsen, LRL 1000 EDT 05/15/2008	
Sources: HURREVAC LRL-DEBRIS	Page 9 of 12

US Army Corps of Engineers

Hurricane Hazel 1954 Population Model

Landfall Plus About 12 Hours

For Planning Purposes Only!

State	Population per State	County	Population per County
North Carolina		Bladen	7,000
		Brunswick	56,000
		Columbus	14,000
North Carolina	77,000		
South Carolina		Horry	36,000
South Carolina	36,000		

The number of persons estimated to be within the hurricane force winds comes from Census 2000 values adjusted to July 2006 values.

Details about this model may be obtained at http://www.englink.usace.army.mil
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Hurricane Hazel 1954 Population Model

Generated By:
Siemsen, LRL 1000 EDT 05/15/2008

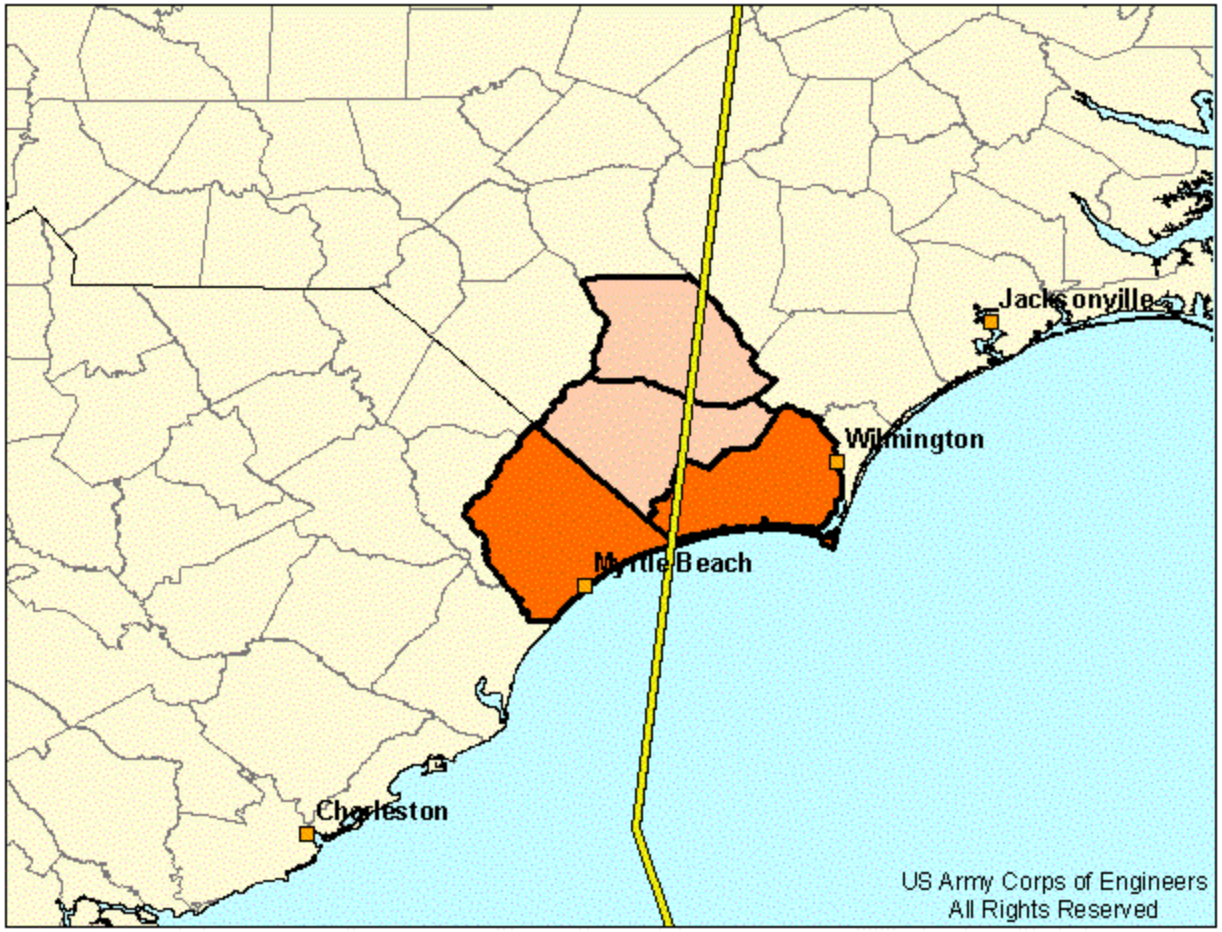
Sources:
HURREVAC
LRL-DEBRIS

Hurricane Hazel 1954 Households Model

Landfall Plus About **12** Hours

US Army Corps of Engineers

For Planning Purposes Only!



0 100 200 Miles

Post Landfall Households Model Results

North Carolina - 33,000
South Carolina - 17,000

Model results per County on following page

This model is based on a Category 1 storm making landfall near Wilmington, NC.

Historic Track

Households

- < 7,500 households
- 7,500 - 14,999 households
- 15,000 - 24,999 households
- 25,000 - 49,999 households
- > 50000 households

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Hurricane Hazel 1954 Households Model	
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Sources: HURREVAC LRL-DEBRIS	Page 11 of 12

US Army Corps of Engineers

Hurricane Hazel 1954 Households Model

Landfall Plus About 12 Hours

For Planning Purposes Only!

State	Households per State	County	Households per County
North Carolina		Bladen	3,000
		Brunswick	24,000
		Columbus	6,000
North Carolina	33,000		
South Carolina		Horry	17,000
South Carolina	17,000		

The number of households estimated to be within the hurricane force winds comes from Census 2000 values adjusted to July 2006 values.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

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Hurricane Hazel 1954 Households Model

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LRL-DEBRIS